



State of Utah

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DIVISION OF OIL, GAS AND MINING

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June 13, 1996

TO: Minerals File

FROM: Tom Munson, Reclamation Hydrologist *DMH/for*

RE: Site Inspection, Western States/Jumbo Mining Co., Drum Mine, M/027/007, Millard County, Utah

Date of Inspection: June 6, 1996
Time of Inspection: 11:00 a.m. - 5:15 p.m.
Conditions: Sunny and warm
Participants: Dave Hartshorn, Jumbo Mining Co.; Sheri Wysong, BLM; Mark Novak, Division of Water Quality; Wayne Hedberg, Tom Munson, DOGM

Purpose of Inspection: To perform an overview evaluation of onsite conditions for comparison against original approved permit.

After arriving at the Drum Mine site, we had an initial meeting in the mine office to review past compliance issues associated with Solid and Hazardous Waste Disposal and related issues. According to Dave Hartshorn, he felt all of the non-compliance issues had been taken care of and Rody Cox was writing the letters to confirm this. We will try to confirm this by contacting the BLM Warm Springs District Office. Dave gave us a draft copy of a response letter (dated December 29, 1995) which he had prepared in response to the BLM's December 13, 1995 letter. He said he sent it to Ed King for his approval but he wasn't sure if Mr. King ever finalized and delivered the letter to the BLM.

We reviewed the status of the underground storage tanks. When the underground storage tanks were pulled, Bruce Hall from the Richfield Central Utah office was in attendance and another state person (Dave Hartshorn couldn't recall his name). Also, the tanks were closed on October 24, 1995, by Conrad Miller, under the supervision of Gary Austin, DERR; and Bruce Hall, Central Utah Public Health Department. A letter was sent to Kent Gray, Utah Solid & Hazardous Waste Control Board on November 30, 1995, documenting this action. A letter from Kent Gray to Mr. Hartshorn on December 20, 1995, notified Mr. Hartshorn that further corrective action was not needed at this time and that the information submitted indicates that any detectable petroleum contamination at the site complies with the State underground storage tank rules. Mr. Hartshorn indicated that all used oil drums and used oil has been recycled. The stockpiled batteries have been salvaged and all spent cyanide drums have been triple rinsed prior to crushing and onsite burial. The unused cyanide drums are now stored inside the processing buildings instead of outside above the process ponds.



We asked Dave if he would please update the present process facilities map. He agreed to do so and would label it to clearly identify all of the existing structures and facilities remaining on the minesite.

One of the major purposes of this inspection was to inspect the heap leach pads to verify that they are built and located as shown on the approved map received March 2, 1989. In 1983, the Bureau of Water Pollution Control permitted three heaps. In 1988, six additional heaps were found which were not permitted by BWPC, making a total of nine heaps onsite. In 1989, heaps 1-5 were again authorized by the Bureau of Water Pollution Control leaving four heaps still unpermitted.

We discussed the water line for the mine and the following information was given to us. The water line is approximately seven miles long and consists of 4" and 6" pipe (@50-50 mix). Dave indicated that approximately two miles of that line needs to be replaced.

We started to inspect the mine facilities area at about 1:15 p.m. The first tour was around the ponds. The pregnant pond was about ½ full of runoff water. Mr. Hartshorn stated they had received a hard rain over Memorial Day. We observed a lime tank, several floating barges in the ponds, a couple pallets of calcium hydroxide, and a mixing station for the cyanide. Most of the ponds are hypalon lined. According to Dave, if they were to reactivate them, the Division of Water Quality would accept the existing hypalon liner as a substitute for a typical clay liner, and they would have to place two additional synthetic liners on top of this base liner. A small, probably 20-15' lime pond, adjacent to the main processing ponds was apparently used by Western States to mix lime in the process. The lime pond is no longer used by Jumbo. Jumbo went to another mixing station adjacent to the process ponds. The tank and the pond was lined with 20 mil pvc liner and could be reclaimed. Mr. Hartshorn believed that it would be Western States responsibility since Jumbo never used it.

During our conversations about the status and history of some of the heaps, Mr. Hartshorn stated that JMC had initiated sprinkling of HG #7 for a short time period before WSMC informed JMC to discontinue the practice. Photos were taken from the top of this heap giving an overview of the process facilities area (@6 photos taken). We walked to the top of heap # 4 and 5 and noted that some of the deteriorated PVC piping had been moved off the top of Heap #1 and HG#2, as evidenced by stacked piles along the base of the heaps (1 photo taken).

We noted that the ditch liners surrounding HG #6 are shot. Mr. Hartshorn stated that "Vance's Spring" was associated with HG #6 and apparently started seeping/leaking while WSMC had it under active leach. Mr. Hartshorn stated that the contractor who installed the liner told him it was ripped during installation and initial grading of the heap. Mr. Hartshorn stated that HG #3 was also identified as a "leaker" and showed the highest head associated with the perched aquifer. The NE corner of the ditch liner is extremely deteriorated. Mr. Hartshorn stated that they only leached part of this heap (@3-4 weeks??) and only in the area where the liner was competent (upper part and south end of the heap). We also walked along the NE and East side of HG #2. The Hypalon liner was filled with rocks and sloughed ore. We observed deer and/or antelope tracks immediately

adjacent to the pregnant pond. Mr. Hartshorn confirmed that he has witnessed these animals drinking from the ponds on occasion with no ill effects.

We also performed a brief overview of the two main production pits (#2 pit was photographed from the north end and #1 pit was photographed from the east side); it was determined that no new mining or changes had occurred and the pits were as shown in the plan.

BLM amendment to WSMC Exploration, 1984 - we also inspected the following exploration locations which Sheri Wysong informed us were on BLM land and had not been closed out.

JMC presumably assumed reclamation responsibility for these two drill sites, originally created by WSMC, when they purchased the Drum Mine properties. The sites are described as follows:

Site #1:

A @900 foot section of access road connects with two spurs at the top of a knoll. The first spur to the east (left spur) is @115 feet long and 25 feet wide. The second spur (right spur) was 330 long and @15 feet wide. Both these spurs had open drill holes at the end of each spur. Total surface disturbance is roughly 0.8 acres. There was no evidence of regrading and/or recontouring of the roads or pad areas and any revegetation has probably invaded from the adjacent undisturbed areas.

Site #2 (Same amendment but further south):

Access to this exploration site is located approximately 50-75 yds. northeast of the intersection of the main mine site access road with the water pipeline corridor. A water storage tank is situated just off the main road next to the water supply pipeline. The drill road measures roughly 2010 feet long and consists of a series of switchbacks and at least 5 drill pad spur cuts. The road averages @15 feet wide. Total disturbance is roughly 0.7 acres at this site. Once again, there was no evidence of regrading and/or recontouring of the roads or pad areas. A couple open drill holes were noted at the upper end (north spur) of the exploration road. Some areas have revegetated themselves to some extent from the invasion of native species from the adjacent undisturbed areas.

Monarch Pit

Mr. Hartshorn indicated this site was originally reclaimed in 1989. He stated that approximately 5,000 tons of ore was mined from this location. It has been reseeded 3 or 4 times since. Although the recontouring work is marginal, the site is exhibiting reasonable vegetation success and may be eligible for release within the near term. The following plants were observed: crested wheatgrass, shadscale, fourwing salt brush, Indian ricegrass, a few bunches of basin wildrye (or tall wheatgrass?), cheatgrass, green rubber rabbitbrush, and squirreltail. The disturbed area was

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visually estimated at @1/2 acre. A question as to the requirement to reclaim the access road leading to this site needs to be answered before the site is ultimately released.

Joy Site (Clara B)

This area, about a 1/4-1/2 acre in size, was backfilled and reclaimed in October of 1989. It is still barren and rocky on the top of the reclaimed knob but the outcrops are doing much better. Gold fields conducted additional drilling in this area following JMC. Goldfields then completed the reclamation of the remaining affected areas. Approximately 8,000 tons of ore was removed. Mr. Hartshorn said he would hand broadcast additional seed this fall when they do any reclamation at the mine. They have a bulldozer and they could use it to rip and reseed the area on top of the pad area. The vegetation looks marginal at this point, although most of the surrounding reclamation work on the exploration project area looks good.

jb

cc: Dave Hartshorn, Jumbo Mining Co.
Sheri Wysong, BLM, Warm Springs RA
Mark Novak, DWQ

M027007.ins



Pumping
Station





Sediment pond
facilities area
6/6/96

6 6 '96



6 6 '96



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